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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,502	11/27/2001	Feng Liang	199-0792 FGT 1605 PA)	2015

7590 08/29/2002
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EXAMINER

LE, DANG D

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 08/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,502

Applicant(s)

LIANG ET AL.

Examiner

Dang D Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 15, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: in the Preliminary Amendment B, in Cross-Reference to related Applications section, line 2, after "May 9, 2000", insert -- now Pat. No. 6,359,366 --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 15, 17 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Akemakou (6,037,691).

Regarding claim 15, Akemakou shows a method of increasing rotor flux and power output in a hybrid permanent magnet synchronous machine (Figure 1b), the method comprising the step of: generating a permanent magnet flux (F2') circulating from one of a first set of permanent magnets (225, left) through a stator (12) to one of a second set of permanent magnets (225, right), said permanent magnet flux continuing

from said one of said second set of permanent magnets through one of a first set of poles (222), an inner rotor portion (212), and one of a second set of poles (221), thereby returning to said one of said first set of permanent magnets, wherein said permanent magnet flux (F2') in said first set of poles and said second set of poles and said inner rotor portion acts in opposition to a field current magnetic flux (F3) generated when a field winding (214) is excited with current.

Regarding claims 17 and 18, these claims are similar to claim 15 except that they recite "a field coil" and "a rotor coil" in the last line of the claims. As a result, these claims are also rejected.

Allowable Subject Matter

4. Claims 19 and 20 are allowed.
5. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: the record of prior art does not show a method of increasing rotor flux and power output in a hybrid permanent magnet synchronous machine comprising the step of:
 - Disposing a first permanent magnet having a first radially-inward surface, a first radially-outward surface, a first side surface and a second side surface between one of said first set of poles and an adjacent one of said second set of poles, wherein said first radially-outward surface and said first side surface

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have a first magnetic polarity; and disposing a second permanent magnet having a second radially-inward surface, a second radially outward surface, a third side surface and a fourth side surface between said one of said first set of poles and the other adjacent one of said second set of poles, wherein said first side surface substantially extends the length of said one of said first set of poles and is located adjacent to said adjacent one of said first set of poles and wherein said third side surface substantially extends the length of said one of said first poles and is located adjacent to said adjacent one of said first poles, wherein said second radially outward surface and said fourth side surface have a second magnetic polarity, where said first magnetic polarity and said second magnetic polarity are opposite magnetic polarities as shown in claim 16.

- Providing a rotor with said first radially-outward surface and said first side surface having a north magnetic polarity, and said second radially-outward surface and said fourth side surface have a south magnetic polarity; thereby generating a permanent magnet flux circulating from one of a first set of permanent magnets through a stator to one of a second set of permanent magnets, said permanent magnet flux continuing from said one of said second set of permanent magnets through one of a first set of poles, an inner rotor portion, and one of a second set of poles, thereby returning to said one of said first set of permanent magnets, wherein said permanent magnet flux said first set of poles and said second set of poles and said inner rotor portion

acts in opposition to a field current magnetic flux generated when a field coil (rotor coil in claim 20) is excited with current as shown in claims 19 and 20.

Information on How to Contact USPTO

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
August 23, 2002

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